

We claim:

1	1. A surgical probe, comprising:							
2	a shaft defining a distal end and a proximal end;							
3	a plurality of energy transmission devices supported on the							
4	shaft; and 6							
5	(c) a tissue cooling apparatus supported on the shaft including an							
6	outer member positioned about the plurality of energy transmission devices							
7	such that a continuous fluid transmission space is defined therebetween							
8	having an inlet and an outlet.							
1	2. A surgical probe as claimed in claim 1, wherein the shaft							
2	comprises a relatively short shaft.							
1	3. A surgical device as claimed in claim 2, wherein at least a							
2	portion of the relatively short shaft is malleable.							
1	4. A surgical device as claimed in claim 1, wherein the plurality of							
2	energy transmission devices comprises a plurality of electrodes.							
2	'							
1	5. A surgical probe as claimed in claim 1, wherein the tissue							
2	cooling apparatus comprises a porous structure.							
4	6. A surgical probe as claimed in claim 5, wherein the porous							
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2	structure comprises a microporous structure.							
1	7. A surgical probe as claimed in claim 1, wherein the fluid							
2	transmission space defines a substantially constant cross-sectional area							
3	between the inlet and the outlet.							
1	(8.) A surgical probe as claimed in claim 8, wherein the fluid							
2	transmission space defines a substantially annular shape.							



1	A surgical probe as claimed in claim 1, further comprising:							
2	a fluid supply line associated with the inlet and supported on the							
3	exterior of the shaft.							
1	10. A tissue cooling apparatus for use with an electrophysiology							
2	apparatus including a shaft and at least one energy transmission device							
3	supported on the shaft, the tissue cooling apparatus comprising:							
4	a base member defining an interior lumen that is slightly larger							
5	than the electrophysiology apparatus shaft and a proximal opening adapted to							
6	receive the electrophysiology apparatus shaft, the base member including a							
7	fluid lumen port in fluid communication with the interior lumen;							
8	a tubular member, associated with the base member, defining a							
9	proximal end, a distal end, an interior lumen substantially aligned with the							
10	base member interior lumen and at/least one aperture located between the							
11	proximal and distal ends; and							
12	an outer member supported on the tubular member such that a							
13	fluid transmission space is defined between the outer member and the tubular							
14	member.							
1	11. A tissue cooling apparatus as claimed in claim 10, wherein the							
2	outer member defines a distal end, the tissue cooling apparatus further							
3	comprising:							
4	a fluid lumen port associated with at least one of the distal end							
5	of the tubular member and the distal end of the outer member.							
1	12. A tissue cooling apparatus as claimed in claim 10, wherein the							
2	base member interior lumen includes a seal adapted to engage the							
. 3	electrophysiology apparatus shaft.							
1	13. A tissue cooling apparatus as claimed in claim 10, wherein the							
2	tubular member comprises a flexible tubular member.							

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1	14. A tissue cooling apparatus as claimed in claim 10, wherein the									
2	at least one aperture comprises a plurality of apertures.									
1	15. A tissue cooling apparatus as claimed in claim 10, wherein the									
2	outer member comprises a porous structure.									
1	16. A tissue cooling apparatus as claimed in claim 15, wherein the									
2	porous structure comprises a microporous structure.									
1	17. A tissue cooling apparatus as claimed in claim 10, wherein the									
2	outer member defines proximal and distal ends and the proximal and distal									
3	ends of the outer member are secured to the tubular member.									
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1	18. A tissue cooling apparatus for use with an electrophysiology									
2	apparatus including a shaft and at least one energy transmission device									
3	supported on a distal portion of the shaft, the tissue cooling apparatus									
4	comprising:									
5	a base member adapted to be removably mounted on the									
6	electrophysiology apparatus shaft including an inlet port and a seal configured									
7	to mate with the electrophysiology apparatus shaft; and									
8	a fluid transfer assembly, operably connected to the base									
9	member, including an outer member in fluid communication with the inlet port									
10	defining a size and shape sufficient to receive the distal portion of the									
11	electrophysiology apparatus shaft in such a manner that a fluid transmission									
12	space is defined between the electrophysiology apparatus shaft and the outer									
13	member and an outlet port.									
1	19. A tissue cooling apparatus as claimed in claim 18, wherein the									
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- 19. A tissue cooling apparatus as claimed in claim 18, wherein the outer member comprises a porous structure.
- 20. A tissue cooling apparatus as claimed in claim 19, wherein the porous structure comprises a microporous structure.



	21.	A tissue o	ooling app	paratus	as	claimed	in claim	18,	wherein	the
fluid	transfer	assembly	includes	a tubu	ular	member	includin	g a	plurality	of
aperl	ures , th	e plurality	of aperture	es bein	g loc	ated with	nin the o	uter	member.	

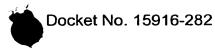
- 22. A tissue cooling apparatus as claimed in claim 18, wherein the tubular member is secured to the base member and the outer member is supported on the tubular member.
- 23. A tissue cooling apparatus for use with an electrophysiology apparatus including a shaft and at least one energy transmission device supported on a distal portion of the shaft, the tissue cooling apparatus comprising:

a fluid transfer assembly defining an inlet, an outlet, and a size and shape sufficient to receive the distal portion of the electrophysiology apparatus shaft in such a manner that a fluid transmission space is defined between the electrophysiology apparatus shaft and the outer member; and

mounting means for removably mounting the fluid transfer assembly onto the electrophysiology apparatus shaft.

- 24. A tissue cooling apparatus as claimed in claim 23, further comprising:
- sealing means for forming a seal between the mounting means and the electrophysiology apparatus shaft.
- 25. A tissue cooling apparatus as claimed in claim 18, wherein the fluid transfer assembly comprises a porous structure.
- 26. A tissue cooling apparatus as claimed in claim 19, wherein the porous structure comprises a microporous structure.
- 27. A tissue cooling apparatus as claimed in claim 23, further comprising:





- sealing means for forming a seal between the mounting means 3
- and the electrophysiology apparatus shaft. 4

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